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R645-301-300. BIOLOGY

310. INTRODUCTION.

320. ENVIRONMENTAL DESCRIPTION.

The Valley Camp of Utah, Inc. Mine Permit Area consists of about six and one-half square miles of land situated in the Wasatch Plateau of Utah astride the Carbon-Emery county line. The property straddles the divide between the headwaters of Huntington Creek on the west and Pleasant Valley on the east. Elevations vary from a low of about 8000 feet in the Pleasant Valley drainage to a high of near 9800 feet on the divide crests. Canyon slopes are steep with rounded summits, and are vegetated.

321. VEGETATION INFORMATION.

The Valley Camp of Utah, Inc., properties and adjacent areas occur within the aspen-spruce-fir phase of the boreal forest biome, with representatives of cool desert shrub, riparian, and, to a lesser extent, mountain brush community types present as significant though minor components. The vegetation map is referred to as Vegetation Map 323.100.

The spruce-fir community, a type mainly on north-facing slopes is dominated by Engelmann spruce and subalpine fir, with variants supporting admixtures of aspen and wet meadow subtypes characterized by species of sedges and grasses. Often broad transitional zones occur between the dense spruce-fir forest and adjacent aspen communities. Occasionally stands of the spruce-fir type are almost entirely single species dominants due to past logging or other successional influence. In greater abundance are stands containing all age classes of both spruce and fir species. The spruce-fir type, including areas transitional into aspen, constitutes some 40 percent of the Mine Permit Area.

TABLE 321A
PLANT COMMUNITIES OF THE VALLEY CAMP LEASE AREA BY PERCENT OF AREA COVERED.

Vegetation Type	Map Designation	Percent
Spruce-Fir	SF	37.8
Aspen	A	21.0
Grass-Forb-Elderberry	GFE	12.8
Sagebrush	SB	21.9
Fringed Sage	FS	0.4
Disturbed	D	6.1
	TOTAL	100%

Baseline data applicable to this section has been moved to Appendix 321. The acreage added for the 1999 Lease Modification was so small it did not effect the plant communities coverage percentages associated with the permit area.

A vegetation study was completed in August, 2001 in the upper Whisky Creek stream to determine the community types that exist and the vegetation species within each community to facilitate the reclamation and restoration of the section of the stream that will be relocated as part of the surface mining operation at the White Oak Complex. The revegetation species selected for the reclamation are included in the MRP and were a direct result of this survey. The results of the vegetation survey conducted by JBR Environmental Consultants, Inc. in the upper Whisky Creek drainage is included in Appendix 3-1.

322. FISH AND WILDLIFE INFORMATION.

Information applicable to this section has been moved to Appendix 321.

322.100 THRU 322.230.

Fish and wildlife information obtained for this permit meets the requirements of the sections.

Resource information has been gathered for the area within the Mine Permit Area and for those portions of the adjacent areas where effects on the resource may be expected to occur, which includes the 1999 Lease Modification area.

The information presented is based on the regulatory authority's determination as to level of detail required and the area of study to be involved. It includes published data and site specific information gathered by the applicant and various consultants.

323. MAPS AND AERIAL PHOTOGRAPHS.

Maps of vegetative types were made by using a mosaic of aerial photographs. Community types were outlined on the photomosaics. Accuracy was assured by correlation of actual communities as inspected on the ground to those discernible on the photographs.

323.100. THRU 323.400.

Refer to Vegetation Map 323.100 and Plate 3-1 (Section 10).

MAP 323.100. Vegetation

330. OPERATION PLAN.

AQUATIC RESOURCE MONITORING PLAN.

ECCLES CREEK

Available data on Eccles Creek include fish survey results (UDWR, 1968-1979); macroinvertebrate survey results (Winget, 1979); water quantity and quality survey results (Hansen Associates, 1979-1980); and stream habitat observations (Winget, 1979). Monitoring of Eccles Creek of Macroinvertebrate samples and habitat measurements and fish surveys have been taken by the DWR in the past. Regular water quality and quantity monitoring is ongoing as required.

MUD CREEK

No surface disturbance of Mud Creek is anticipated. Sedimentation from upstream land use is one of the potential threats to Mud Creek. Sediment samples will be taken at a frequency and duration depending upon success of sediment control upstream.

JAMES CANYON CREEK

Cutthroat trout have been observed in high number in James Canyon Creek during the spring spawning time. James Canyon Creek is an important part of the fisheries resource of Electric Lake. The stream will probably not be impacted by the Belina Project. If the stream is impacted a monitoring and protection plan will be initiated.

SLAUGHTERHOUSE, BOARDINGHOUSE, FINN, WHISKY, LONG, AND MUD CREEKS

These streams are all intermittent, at least during low precipitation years. As such they are not considered as important parts of the fishery resources of Mud Creek or Scofield Reservoir (personal communication, Mr. John Livesay, UDWR, Price Office, November 7, 1979). All but Whisky Creek will not be directly impacted by the Belina Project, a monitoring or protection plan will not be necessary. Upper Whisky Creek will be affected by the surface mining project. The intermittent water flow of this section of the stream will report to a sediment pond to control the downstream sediment load until the stream relocation has been completed and the revegetated area has been established to the degree necessary to remove the pond.

AVIFAUNA AND RAPTOR PLAN

Ornithological investigations have been accomplished over several time periods in the Scofield, Skyline, and Valley Camp of Utah, Inc. coal mining areas. Specifically, these periods have been: December 1, April 7-8, April 25-26, May 17-18, June 13-14, and July 26-29. During these periods a record has been maintained on threatened or endangered species, raptors and raptor nests, occurrences of species of high Federal interest, and migratory birds. The obvious time period where observations are missing is during the major autumn migration period of September-October. This may represent a critical time. For example, the peak raptor migration along the Wasatch Front, 60 miles north of Scofield, revealed a total of 308 migration raptors recorded between September 9 and October 4 with the peak number around mid to late September (Mosher, et al. 1978).

No part of the Mine Permit Area has shown evidence of being inhabited by the endangered Northern Bald Eagle which occurs in the Scofield area during the migration season between November 15 and March 15 each year. Currently no roost trees have been observed. Two active nests were found in Eccles Canyon, one of the Goshawk and the other of the Cooper's Hawk (White, 1980). The Cooper's Hawk is a species of high federal interest. These two species can generally tolerate considerable human impact. The Golden Eagle, also of high federal interest, has been seen in the Mine Permit Area, but no nests were found. During the raptor survey conducted in 1998 in cooperation with the DWR, two nests were located in Boardinghouse Canyon. One nest was documented as a redtail hawk nest, the other as a buteo nest. Both nests are located in the north west corner of SW1/4 SE1/4, T13S, R7E, Section 30. No nests were documented in 1999.

In order to minimize disturbance to the Bald Eagle and other endangered or important species all personnel associated with the mining operation will be made aware of the birds' annual presence and value to society. These people will also be instructed not to disturb Bald Eagles or other endangered or important raptors. If a roost tree is located it will be immediately reported to the UDWR and the USFWS. Roost trees and a suitable buffer zone will be protected from human disturbance during the winter period.

Design and construction of all electric power lines and other transmission facilities will be in accordance with guidelines set forth in "Environmental Criteria for Electric Transmission System" published by the USDI and USDA in 1970 and/or the REA Bulletin 61-10 "Powerline Contacts by Eagles and Other Large Birds."

In 1982 Mr. Ron Joseph of the United States Department of the Interior, Fish and Wildlife Service, 1311 Federal Building, 125 South State Street, S.L.C., Utah, conducted a power distribution line survey of the permit area and found no threat to the Bald or Golden eagle. Mr. Joseph stated previous Fish and Wildlife Service (FWS) surveys have not shown a problem with powerlines in coniferous cover primarily because trees themselves offer much better perch sites than crossarms of power poles. Mr. Joseph also stated that, on close examination, the powerlines did not reveal any use by raptors. This may be verified in the Fish and Wildlife Service survey report to Mr. Cleon Feight, Director of the Utah Division of Oil, Gas and Mining, Dated November 10, 1982.

HIGH INTEREST WILDLIFE AND HIGH VALUE HABITATS

Mule deer and elk inhabit high priority and crucial-critical winter ranges between November 1 and May 15 each year. These areas will be protected from exploration activities during the inhabited periods. Disturbances on high priority deer winter ranges will be kept to a minimum.

Big game on winter ranges are sensitive to disturbances. Therefore, all personnel associated with the mine will be instructed on the annual presence and value of this big game. Efforts will be made to avoid any unnecessary disturbance by man.

If the mining operation installs structures which present barriers to wildlife's daily movements, suitable passage structures will be installed.

WILDLIFE PROTECTION PLAN

1. All roads under the applicant's control, and within the Mine Permit Area, will have posted speed limits.

2. The access road along Whisky Canyon will be posted with warning signs indicating possible animal crossing areas.

3. Design and construction of power transmission and distribution lines will be in accordance with guidelines set forth in "Environmental Criteria for Electric Transmission System" (USDI, USDA [1970]) and REA Bulletin 61-10.

4. Consideration of possible restriction of animal movement will be incorporated into the design and installation of all structures within the Mine Permit Area.

5. All hazards associated with the mine will be fenced or covered to minimize danger to wildlife.

6. Disturbances to big game on high priority winter range will be kept to a minimum.

7. Wildlife habitat will be enhanced at the time of reclamation (using the best technology currently available) through restoration of habitat features and selection of reclamation materials that will improve the quality and or quantity of forage and or cover.

8. All riparian habitat disturbed by the applicant during mining will be reclaimed to pre-mining status.

9. The presence of any threatened or endangered plant or animal within the Mine Permit Area will be reported to the appropriate regulatory agency.

10. Adequate precautions will be taken to keep coal out of stream channels.

11. Personnel associated with the mine will be informed of the values of the wildlife resource associated with the Mine Permit Area and adjacent area.

12. All mine personnel will be instructed through annual training on the importance of fish and wildlife protection.

Smaller areas of riparian habitat are found in Whisky Canyon, South Fork of Eccles Canyon, and minor drainages associated with these canyons. The portal site in Whisky Canyon was developed under the 211 Program and affected the riparian habitat in that area. Stream disturbance related to surface activities will occur within the Mine Permit Area. However, the impact on fish should be minimal. Mitigation measures will include a Surface Water Monitoring Program, and sediment control, as well as activities proposed by the applicant and approved by the proper authority.

The total area of the permit is considered critical summer range for elk, deer, and summer range for moose, including the 1999 Lease Modification area (Plate 3-2). There is no winter range use with the exception of the riparian habitat areas used by moose, as well as for spring calving. No threatened or endangered plant or wildlife species are known to inhabit the lease modification area, per studies performed by BLM and Forest Service in conjunction with their approval of the modification to lease U-017354.

Valley Camp has infrared aerial photography from the forest service subsidence monitoring endeavor in the late seventies and early eighties. This infrared photography should suffice for the forest service needs presently and should additional infrared be needed, the bond release aerial photography commitment could include it.

Surveys for raptor nests in the areas providing a nesting habitat have been conducted from 1993 through 2001 and it has been determined by the Division of Wildlife Resources that the area surveyed around the mine permit area is not suitable for golden eagle, prairie falcon, or peregrine falcon nesting. It is however highly suitable for red-tail hawks and goshawks. DWR recommends that aerial surveys of the area are not an effective method of locating red-tailed and goshawk nests. Future surveys will be conducted in areas of new and proposed disturbance by a professional qualified in raptor biology using approved ground survey methods.

331.

Refer to 341.100 and 341.200

332. SUBSIDENCE.

333.0 THRU 333.300.

A survey (for presubsidence) within or adjacent to the Valley Camp of Utah, Inc. Mine Permit Area conducted for Valley Camp Utah, Inc. by Endangered Plant Species through Vaughn Hansen Associates, demonstrates that areas for agricultural or silvicultural production of food and fiber and grazing lands are of such low production that they can be classified as non-renewable resource lands. The statement regarding food and fiber has been taken from the presubsidence survey report prepared by EPS, Inc. in 1980. This report was approved in the 1984 TA by OSM.

Aquifers and areas for the recharge of aquifers and other underground waters will suffer minimal adverse impacts from the mining activities. Should subsidence occur the subsidence cracks will likely seal rapidly preventing the deep percolation of water and subsequent loss of springs and other water sources (Hansen, 1980).

Refer to 222 thru 223 Soil Survey and 322 Vegetation Information. This survey was conducted by Vaughan Hansen & Associates. The information referenced above was approved by the Division for insertion as the "Renewable Resource Survey" requirements by Mr. Lynn Kunzler.

The Subsidence Base Map, shows survey monument information, gas line locations, power lines and other information. The determination of the types of lands that exist within and adjacent to the Mine Permit Area were determined by use of Federal Government land use maps and private consultants. The productivity levels of this land are discussed in 200 and 300. Refer also to Soil Map 222.100 and Vegetation Map 323.100.

The only structures which could be damaged if subsidence occurs are gas pipelines. These structures will be protected by limiting extraction directly under the pipelines and within an area including a 35 degree angle of draw from the lowest coal seam to be mined. Such a label actually applied to the agricultural portion of the definition of a "Renewable Resource", and not to aquifers and areas for the recharge of aquifers or silvicultural production. Material damage or diminution of value of aquifers is discussed in the Vaughn Hansen Associates Report.

The forest land is classed as a renewable resource, and as such, will be afforded maximum subsidence protection in order to ensure future productivity.

Should material damage be incurred to the Mountain States Resources (now doing business as Questar Pipeline Company) natural gas pipelines, despite the approved subsidence damage prevention measures, the applicant will repair the damage to the pipelines caused by subsidence from the applicant's mining activities or compensate the owner of the pipeline for such damage. Any area roads which are materially damaged by subsidence will be repaired and re-graded to restore them to pre-subsidence usefulness. A buffer zone of at least 150 feet is left around natural gas wells in the Mine Permit Area. Subsidence should not cause damage to the wells.

Belina No. 1 Mine Map E1-0002 (Map 521.100.) and Belina No.2 Mine Map D2-0060, (Map 521.100.) indicate mining plan consideration of subsidence protection for surface structures. The plan calls for an angle-of-draw of 35 degrees. If the monitoring study indicates a different angle-of-draw, the plans will be modified. Also included as part of the Subsidence Plan is approval from the MMS for using a 35 degree angle-of-draw for limited extraction. It is anticipated that the true draw angle will be determined when actual subsidence data become available.

The Subsidence Control plan is presented in Appendix 724.600. Associated subsidence mapping is identified as the Belina No. 1 Mine Map E1-0002 (Map 521.100), the Belina No.2 Mine Map D2-0060, (Map 521.100), and Subsidence Base Maps 728.100a , 728.100b and Plate 2-1 (Section 10).

A stipulation in the modification to lease U-017354 is that no subsidence is to occur due to mining activities. Therefore, the mining plan reflects a "no subsidence"recovery plan approved by the BLM per the Joint Decision Memo included as Attachment A to Section 10 of this M&RP.

Projected water usage for the surface mine for dust control is an average of 1,775 gallons per operating day or 1,190 gallons per annual day. This will equate to 1.332 acre-ft of water used annually for dust control.

340. RECLAMATION PLAN.

Information related to reclamation applicable to this section has been moved to the MRP volume of the October 2001 permit submittal.

350. PERFORMANCE STANDARDS.

351. GENERAL REQUIREMENTS.

All coal mining and reclamation operations will be carried out according to plans provided under 330 thru 340.

352. CONTEMPORANEOUS RECLAMATION.

The revegetation on all disturbed land by the coal mining and reclamation operations will be done as contemporaneous as practicable.

353. THRU 353.300. REVEGETATION: GENERAL REQUIREMENTS.

The vegetative cover will be diverse, effective, and permanent, and comprised of species native to the area, or of introduced species where desirable and necessary to achieve the approved post mining land use and approved by the Division, being at least equal in extent of cover to the natural vegetation of the area and be capable of stabilizing the soil surface from erosion. The reestablished plant species will be compatible with the approved post mining land use and have the same seasonal characteristics of growth as the original vegetation. Also it will be capable of self-regeneration and plant succession and be compatible with the plant and animal species of the area and meet the requirements of applicable Utah and federal seed, poisonous and noxious plant and introduced species laws or regulations.

353.400.

N/A

354. THRU 355. REVEGETATION.

Information related to reclamation applicable to this section has been moved to the "Reclamation Plan" volume of this permit submittal.

356. REVEGETATION: STANDARDS FOR SUCCESS.

356.100.

Success of revegetation will be judged on the effectiveness of the vegetation for the approved postmining land use, the extent of cover compared to the extent of cover of the reference area or other approved success standard, and the general requirements of 353.

Additional information related to reclamation applicable to this section has been moved to the "Reclamation Plan" volume of this permit submittal.

356.300 THRU 356.400.

Adequate siltation structures will be maintained until the site has been vegetated and stabilized and removal is authorized by the Division. When structures are removed the affected area will be revegetated in accordance with the Reclamation Plan.

357. REVEGETATION: EXTENDED RESPONSIBILITY PERIOD.

357.100 THRU 357.300.

Since the precipitation is near 26 inches annually, the five-year extended responsibility period may apply. Attached in Appendix 7-1 is rainfall data for mid-1984 to 2000. This data will be updated as reclamation becomes imminent.

No husbandry practices are envisioned at this point in time.

358. PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES.

358.100. THRU 358.530.

Valley Camp will, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts on fish, wildlife, and related environmental values and will achieve enhancement of such resources where practicable. Refer to 330.

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Revised: October 2001

VALLEY CAMP ACT/007/001 REVISION			INCORPORATED INTO MRP BY DOGM			VALLEY CAMP ACT/007/001 REVISION			INCORPORATED INTO MRP BY DOGM			VALLEY CAMP ACT/007/001 REVISION			INCORPORATED INTO MRP BY DOGM		
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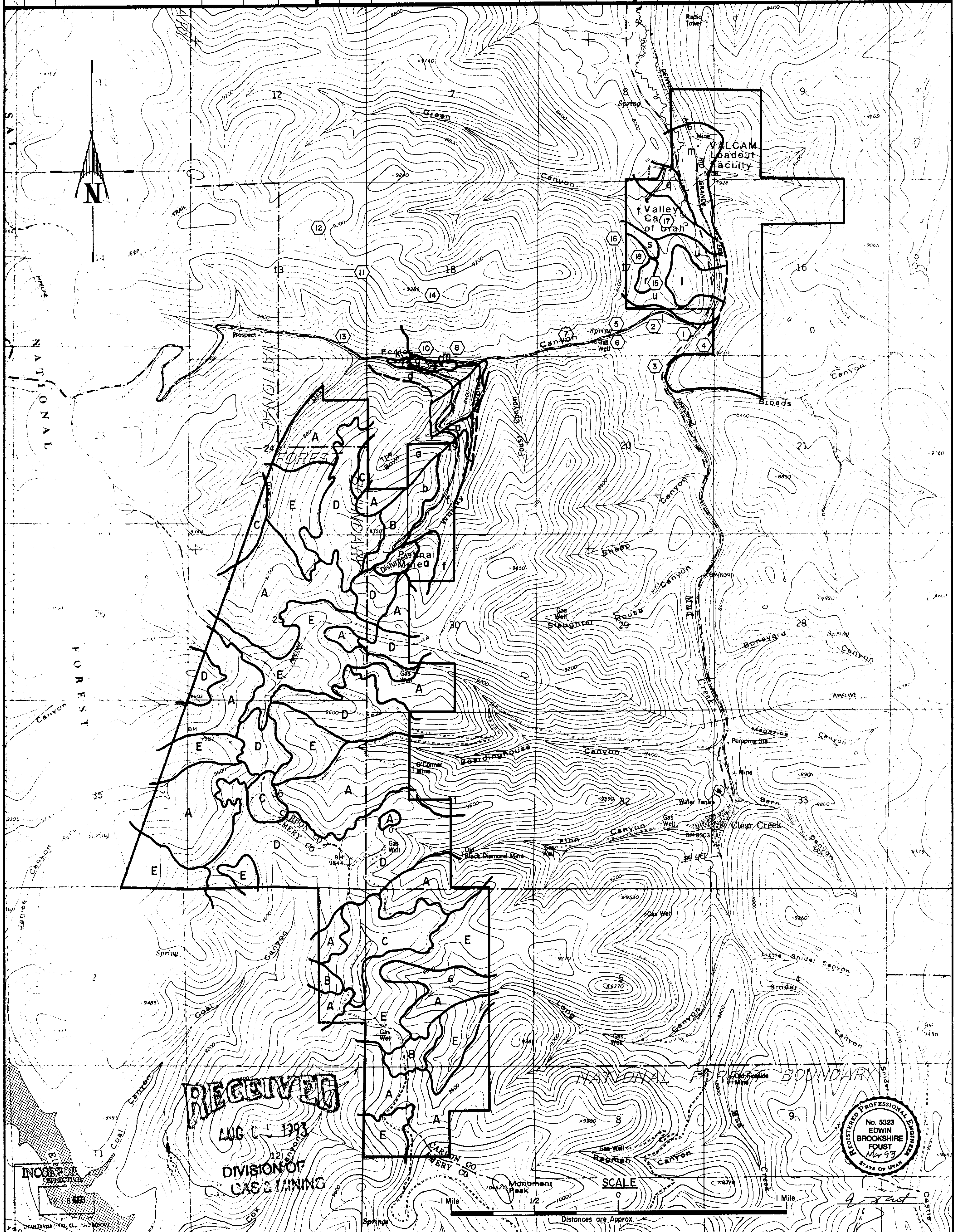

LEGEND: STUDY BY EPS, INC.

⬡ - SAMPLE SITES
A - Loamy-skeletal, mixed, mollic cryoboralfs
B - Fine loamy, mixed Argie Pachic Cryoborolls
C - Loamy-skeletal, mixed Argie Cryoborolls
D - A complex of units B and C
E - A complex of units A, B and C
a - Loamy-skeletal, mixed, mollic cryoboralfs
b - Fine loamy, mixed Argie Pachic Cryoborolls
f - Similar to b with 30% of the soils having a slope greater than 60% with as much as 50% rock fragments below 12 inches.
g - Course-loamy, mixed Pachic Cryoborolls
k - Course-loamy, mixed Cumulic Cryoborolls
l - Loamy-skeletal, mixed Typic Cryoboralfs
m - Loamy-skeletal, mixed, Typic Cryoboralfs
q - Course-loamy, mixed Cumulic Cryoborolls
r - Typic Argiborolls, course-loamy, mixed, frigid
s - Complex of 10% r, 45% t, and 35% u
t - Mollic eutroboralfs course-loamy, mixed, frigid with 15% u and 5% q
u - Typic haploborolls, course-loamy, mixed, frigid with 5% r

VALLEY CAMP OF UTAH, INC.

SCOFIELD ROUTE, HELPER, UTAH 84526

TITLE: R645-301-223.100. SOILS

Drawn by: Ed Sanderson | Date: Sept. 1, 89
Approval: | Date:

Drawing No. R645-301-223.100 | Rev. 1 3/93

SAND DESIGN & GRAPHICS | SCALE: | SHEET 1 of 1

ETS 5-89

VALLEY CAMP ACT/007/001 REVISION			INCORPORATED INTO MRP BY DOGM			VALLEY CAMP ACT/007/001 REVISION			INCORPORATED INTO MRP BY DOGM			VALLEY CAMP ACT/007/001 REVISION			INCORPORATED INTO MRP BY DOGM		
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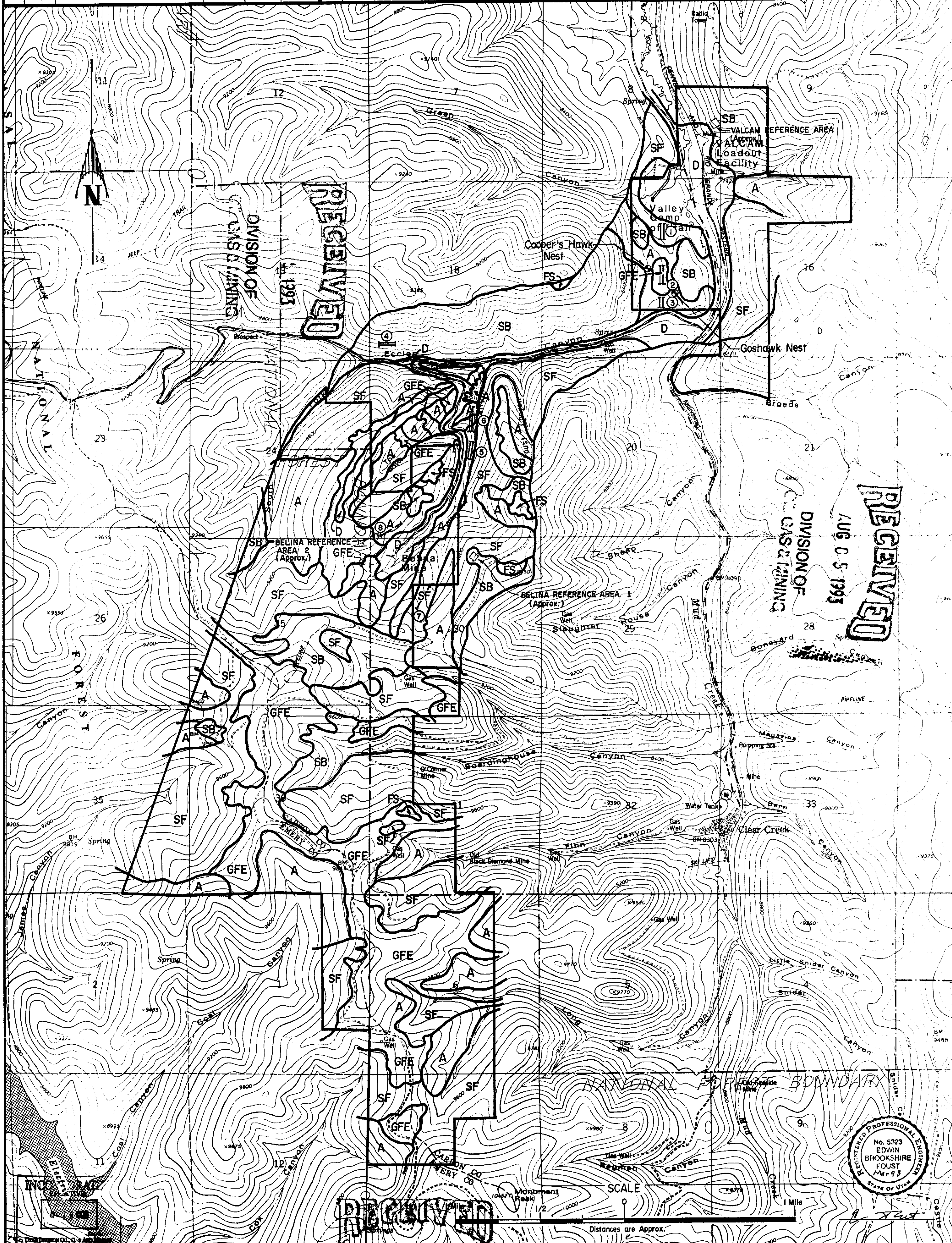

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REGISTERED PROFESSIONAL ENGINEER No. 5323 EDWIN BROOKSHIRE FOUST Mar 93 STATE OF UTAH

LEGEND: STUDY BY EPS, INC.

- A – Aspen
- FS – Fringed Sage
- GFE – Grass-Forb-Elderberry
- SB – Sagebrush
- SF – Spruce - Fir
- D – Disturbed
- ⊢⊣ – Transect Locations (not mapped to scale)
- ① – Lower Canyon Spruce/Fir
- ② – Aspen Openings (nettle)
- ③ – Aspen
- ④ – Sagebrush
- ⑤ – Whisky Canyon Aspen
- ⑥ – Whisky Canyon Spruce
- ⑦ – Portal Spruce/Fir
- ⑧ – Portal Aspen

AUG 0 5 1993

DIVISION OF OIL GAS & MINING

Note: Reference areas shown are subject to change prior to reclamation. (See MRP)

VALLEY CAMP OF UTAH, INC.

SCOFIELD ROUTE, HELPER, UTAH 84526

TITLE: R645-301-323.100. VEGETATION

Drawn by: Ed Sanderson | Date: Sept. 1, 89
Approval: | Date:

Drawing No. R645-301-323.100. | Rev. 1 3/93

SAND DESIGN & GRAPHICS | SCALE: | SHEET 1 of 1

ETS-5-89